

## **Abstract**

A method and a device for non-invasive blood pressure measurement wherein the angle between the hand and the wrist, and the turning angle of the wrist relative to the middle part of the forearm, are kept to the most suitable degree for measuring the blood pressure of the radial artery. At least one pressure bladder and one arterial pulse transducer array are placed on the skin over the radial artery of the wrist to apply the external pressure to the artery and to detect the change of the arterial pulse signals. This method and device can correctly measure the intermittent or continuous blood pressure of the radial artery or the ulnar artery based on the principles of volume oscillation method and volume compensation method, and effectively eliminate the influence on the measurement due to body movement and the influence on blood circulation and neural function of the hand caused by long-term blood pressure measurement.